DATA SHEET

PRIMERGY RX300 S4

Issue: **April 2009**

- Dual Socket, Quad-Core, Xeon® 2U based Rack Server – Compact capacity in central service to your departments

PRIMERGY RX servers offer the perfect solution to downsize data center infrastructure costs efficiently. Basis for it is an IT strategy for more transparency of structure- and administrative expenses as well as maximum use of investments. Our broad portfolio of innovative virtualization, server and solution offerings for TCO reductions of 60% or more provides best prerequisites. Optimized air flow cooling technology assures a long life, highest possible performance/watt as well as by far best in class efficiency -proven by numerous benchmark records.
Benefit from our renowned experience in datacenter technology. These allow it, to transfer the availability rates of high end UNIX servers to RX rack servers, PRIMECENTER rack enclosures and infrastructure products.
PRIMERGY ServerView Suite with remote management functions provides comprehensive management from anywhere at any time. Our flexible custom supply model and our build-to-order process means that only fully built and pre-tested rack solutions are shipped to the customer. Last but not least Fujitsu Technology Solutions proven commitment to green IT offers clear competitive advantages to our customers.

PRIMERGY RX300 S4

PRIMERGY RX300 S4 rack server packs the capacity of a fully-featured departmental server into a rack design only 2 U in height. It is offering the performance features of leading edge Dual- or Quad-Core Intel® Xeon® 5200/5300/5400 series CPUs embedded in a powerful design with an 8-port SAS controller and fast PCIe links and PCI-X busses. Expandability is covering for nearly any workload: 48 GB FBD667 memory, up to 12x 2.5 inch or up to 6x 3.5 inch SAS hard disk drives, and 6 free PCIe and PCI-X slots for heavy I/O requirements perfect for virtualization tasks. To guarantee its high availability level, PRIMERGY RX300 S4 delivers: redundant hot-plug power supply and fans option, Hot-pluggable hard disk drives and a modular RAID. Special attention is given to secure memory data, with SDDC hot-spare and memory mirroring option. The „Cool-safe™“ technology secures optimal temperatures even at peak workloads, such ensuring longevity and extended Mean Time Between Failures. PRIMERGY RX300 S4 is suited ideally to meet demands for continuous operation in business critical environments, running data bases, terminal services, business applications or consolidation and virtual machine tasks.

MAIN FEATURES	BENEFITS
Dual- or Quad-Core Intel Xeon 5200/5400 series and 6/ 2x 6 MB SLC offer outstanding Dual- or Quad-Core performance and balanced architecture that incorporates latest memory and I/O technologies	Higher overall productivity through outstanding Dual-/Quad-Core performance with fast FSB, large L2 cache etc. 64-bit computing for demanding applications, with full compatibility for 32-bit legacy applications, ideal for database applications
PCI-Express attached onboard 2x Gbit/s Ethernet LAN and modular RAID controller in PCIe slot	Fast communication path through usage of PCI-Express
Internal max. 6x 450 GB SAS / 6x 1 TB SATA 3.5“ HDD or up to 12x 146 GB 2.5” SAS HDD, all hot-plug, 6 free PCIe and PCI-X slots	Highest flexibility on basis of latest I/O technologies for consolidation of data and applications.
Hot-plug, redundant power supply and fans options, Hot-plug hard disks, modular RAID5, LSP module option	No-break repair service saves cost, reduces planned and unplanned downtimes
Integrated Remote Management Controller (iRMC), IPMI 2.0	Comfort and security for continuous operation

Technical details

PRIMERGY RX300 S4

Hard disk architecture	12x 2.5” SAS	6x 2.5” SAS	6x 3.5” SAS/SATA

Mainboard

Mainboard type	D 2519
Chipset	Intel® 5000P
Processor quantity and type	1 - 2 x Intel® Xeon® processor 5200 / 5300 / 5400 series
Processor options	Intel® Xeon® E5205 (2C, 1.86 GHz, SLC: 6 MB, 1066 MHz, 65 W)
	Intel® Xeon® E5405 (4C, 2.00 GHz, SLC: 2 x 6 MB, 1333 MHz, 80 W)
	Intel® Xeon® E5410 (4C, 2.33 GHz, SLC: 2 x 6 MB, 1333 MHz, 80 W)
	Intel® Xeon® E5420 (4C, 2.50 GHz, SLC: 2 x 6 MB, 1333 MHz, 80 W)
	Intel® Xeon® E5430 (4C, 2.66 GHz, SLC: 2 x 6 MB, 1333 MHz, 80 W)
	Intel® Xeon® E5440 (4C, 2.83 GHz, SLC: 2 x 6 MB, 1333 MHz, 80 W)
	Intel® Xeon® L5240 (2C, 3.00 GHz, SLC: 6 MB, 1333 MHz, 40 W)
	Intel® Xeon® L5310 (4C, 1.60 GHz, SLC: 2 x 4 MB, 1066 MHz, 50 W)
	Intel® Xeon® L5410 (4C, 2.33 GHz, SLC: 2 x 6 MB, 1333 MHz, 50 W)
	Intel® Xeon® L5420 (4C, 2.50 GHz, SLC: 2 x 6 MB, 1333 MHz, 50 W)
	Intel® Xeon® L5430 (4C, 2.66 GHz, SLC: 2 x 6 MB, 1333 MHz, 50 W)
	Intel® Xeon® X5260 (2C, 3.33 GHz, SLC: 6 MB, 1333 MHz, 80 W)
	Intel® Xeon® X5270 (2C, 3.50 GHz, SLC: 6 MB, 1333 MHz, 80 W)
	Intel® Xeon® X5460 (4C, 3.16 GHz, SLC: 2 x 6 MB, 1333 MHz, 120 W)
	Intel® Xeon® X5470 (4C, 3.33 GHz, SLC: 2 x 6 MB, 1333 MHz, 120 W)
Memory slots	12 (2 Memory boards with 6 slots each, 1 memory board preinstalled)
Memory slot type	PC2-5300F (Fully buffered DIMM DDR2 667 ECC)
Memory capacity (min. - max.)	1 GB - 48 GB
Memory Protection	Advanced ECC Memory Scrubbing SDDC (Chipkill™) Hot-spare memory support Memory Mirroring support
Memory options	8 GB (2 module(s) with 4 GB), FB-DIMM (DDR2), 667 MHz, PC2-5300F
	4 GB (2 module(s) with 2 GB), FB-DIMM (DDR2), 667 MHz, PC2-5300F
	2 GB (2 module(s) with 1 GB), FB-DIMM (DDR2), 667 MHz, PC2-5300F
	1 GB (2 module(s) with 512 MB), FB-DIMM (DDR2), 667 MHz, PC2-5300F
Upgrade notes	A BIOS update can be necessary for a memory and processor upgrade.

Interfaces			
USB ports	6 x USB 2.0 (2x front, 2x rear, 2x internal)		
Graphics (15-pin)	1 x VGA		
Serial 1 (9-pin)	1 x serial RS-232-C, usable for iRMC or system or shared		
Serial 2 (9-pin)	1 as option (occupies PCI slot 1)		
Parallel (25-pin)	1 x Centronics as option (occupies PCI slot 5)		
Mouse / Keyboard (PS/2)	2		
LAN / Ethernet (RJ-45)	2 x Gbit/s Ethernet		
Service LAN (RJ45)	1 x dedicated service LAN port for iRMC S2 (10/100 Mbit/s) Service LAN traffic can be switched to shared onbord Gbit LAN port		
Onboard or integrated Controller			
RAID Controller	Integrated RAID 0/1 or RAID 5/6 controller for SAS base units (occupies one PCIe slot). See under Components RAID controller		
SATA Controller	ESB2-T, with two SATA channels for DVD + backup		
LAN Controller	BCM 5708S, 2 x 10/100/1000 Mbit/s Ethernet (TCP/IP acceleration), PXE Boot or iSCSI boot via onboard LAN		
Remote Management Controller	Integrated Remote Management Controller (iRMC S2, 32 MB attached memory incl. graphics controller), IPMI 2.0 compatible		
Trusted Platform Module (TPM)	Infineon / 1.2 (option)		
Slots			
PCI-Express x4 (mech. x8)	6 x low profile		
PCI-X	1 x 64-bit / 133 MHz, 3.3 V		
Slot Notes	Two of four PCI-Express x4 slots can be used as x8, if neighbour slot is empty. 1 x PCI-Express x4 occupied by modular RAID controller		
Drive bays			
Accessible drive bays	1 x 5.25/0.5-inch for CD-RW/DVD 1 x 3.5/0.5-inch for ServerView Local Service Panel or Local Service Display or FDD 1 x 3.5/1.6-inch for backup devices (occupies 2x 3.5 or 6x 2.5-inch HDD bay)		
Notes accessible drives	All possible options described in relevant system configurator.		
Drive bays (Base unit specific)			
Hard disk bays	12 x 2.5-inch hot-plug SAS	6 x 2.5-inch hot-plug SAS	6 x 3.5-inch hot-plug SAS/ SATA
Optional hard disk bays		6 x 2.5-inch hot-plug SAS	
General system information			
Fan configuration	4 hot-plug fans as standard, redundant fan unit with 4 hot-plug fans as option (1+1 redundancy)		
Operating panel			
Operating buttons	On/off switch NMI button Reset button		
Status LEDs	System status (amber / yellow) Identification (blue) Hard disks access (green) Power (amber / green) At system rear side: System status (amber / yellow) Identification (blue) LAN connection (green) LAN speed (green / yellow)		
Service display	Optional: ServerView Local Service Panel (LSP) ServerView Local Service Display (LSD)		

BIOS	
BIOS features	ROM based setup utility Recovery BIOS BIOS settings save and restore Local BIOS update from USB device Online update tools for main Windows and Linux versions Local and remote update via ServerView Update Manager SMBIOS V2.4 Remote PXE boot support Remote iSCSI boot support
Supported operating systems	
Supported operating systems	Microsoft® Windows Server® 2008 Microsoft® Windows Server® 2003 Novell SUSE Linux Enterprise Server Red Hat Enterprise Linux VMware Infrastructure Note: Support of other Linux derivatives on demand
Operating system release link	http://ts.fujitsu.com/software http://docs.ts.fujitsu.com/dl.aspx?id=a9e600b9-e4cb-4f48-aa41-632f69058421
Server Management	
Standard	ServerView Suite: SV Installation Manager SV Operation Mananger SV RAID Manager SV Update Manager SV Agents Online update packages for BIOS, firmware drivers and ServerView Agents ServerView Integration solutions for Microsoft SMS, MOM, SCOM, SCCM and Altiris Deployment Solution ServerView Deployment Manager (fully functional 30-day trial version)
Option	ServerView Deployment Manager (fully functional unlimited version) ServerView Remote Management ServerView Integration for Tivoli TEC®, Tivoli NetView, HP OpenView NNM and HP OpenView iRMC S2 Advanced Pack
Server Management Notes	Regarding Operating System dependencies and product details for ServerView Suite Software Products see dedicated Product Data sheets.
Dimensions / Weight	
Rack (W x D x H)	482.6 x 785 x 85.9 mm
Mounting Depth Rack	745 mm
Height Unit Rack	2 U
19” rackmount	Yes
Weight	up to 25 kg
Weight notes	Weight may vary depending on actual configuration
Rack integration kit	Rack integration kit as option
Environmental	
Noise emission	Measured according to ISO 7779 and declared according to ISO 9296
Sound pressure (LpAm)	52 dB(A) (idle) / 52 dB(A) (operating)
Sound power (LWAd; 1B = 10dB)	6.9 B (idle) / 6.9 B (operating)
Operating ambient temperature	10 - 35°C
Operating relative humidity	10 - 85 % (non condensing)
Electrical values	
Power supply configuration	hot-plug power supply as standard, redundancy as option (1 + 1 redundancy)
Max. output of power supply	700 W
Hot-plug power supply redundancy	Yes
Rated voltage range	100 - 240 V
Rated frequency range	50 - 60 Hz
Rated current max.	8.0 A – 3.5 A (100 V / 240 V)
Rated current in basic configuration	4.2 A - 1.4 A (100 V / 240 V)

Electrical values	
Active Power max. (per system unit)	726 W
Apparent power max. (per system unit)	737 VA
Heat emission	2613.6 kJ/h (2477.8 BTU)
Compliance	
Germany	GS
Europe	CE
USA/Canada	CSAc/us ULc/us FCC Class A
Global	CB RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronical equipment)
Japan	VCCI
Australia&New Zealand	C-Tick
Taiwan	BSMI
Compliance notes	There is general compliance with the safety requirements of all European countries and North America. National approvals required in order to satisfy statutory regulations or for other reasons can be applied for on request.
Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Components

Hard disk drives	SATA, 3 Gb/s, 1000 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s, 750 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s, 500 GB, 7200 rpm, hot plug, 3.5-inch
	SATA, 3 Gb/s, 250 GB, 7200 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 450 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 300 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 146 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 146 GB, 10000 rpm, hot-plug, 2.5-inch
	SAS, 3 Gb/s, 73 GB, 15000 rpm, hot plug, 3.5-inch
	SAS, 3 Gb/s, 73 GB, 15000 rpm, hot-plug, 2.5-inch
	SAS, 3 Gb/s, 73 GB, 10000 rpm, hot-plug, 2.5-inch
	SAS, 3 Gb/s, 36 GB, 15000 rpm, hot plug, 2.5-inch
Hard disk notes	One Gigabyte equals one billion bytes, when referring to hard disk drive capacity. Accessible capacity may vary, also depending on used software
Tape Drives	DDS Gen5 (for 3.5-inch HDD bay), 36 GB , 3 MB/s, half height, USB 2.0
	RDX Drive (for 3.5-inch HDD bay), 80 GB, 160 GB, 320 GB , 25 MB/s, half height, USB 2.0
Optical drives	Blu-ray combo drive, (2x BD-ROM; 8x DVD; 24x CD), slimline, SATA I
	CD-RW / DVD Combo, (8x DVD; 24x CD/CD-R, 16x CD-RW), slimline, SATA I
	DVD Super Multi, (8x DVD/DVD+RW, 6x DVD-RW, 5x DVD-RAM; 24x CD/CD-R, 16x CD-RW), slimline, SATA I
SCSI / SAS Controller	SCSI Ctrl 320 MB 1x int /1x ext
	SAS Ctrl 3 Gb 4 ports int. / 4 ports ext.
RAID Controller	RAID 5/6 Ctrl, SAS/SATA 3 Gb, LSI MegaRAID SAS8880E, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, optional BBU (based on LSI 1078)
	RAID 5/6 Ctrl, SAS/SATA 3 Gb, LSI MegaRAID SAS8880E, 8 ports ext. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, inclusive BBU (based on LSI 1078)
	Integrated RAID 5/6 Ctrl, SAS/SATA 3 Gb, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 512 MB Cache, optional BBU (based on LSI 1078)
	Integrated RAID 5/6 Ctrl, SAS/SATA 3 Gb, 8 ports int. RAID level: 0, 1, 10, 5, 50, 6, 60, 256 MB Cache, optional BBU (based on LSI 1078)
	Integrated RAID 0/1 Ctrl, SAS/SATA 3 Gb, 8 ports int. RAID level: 0, 1, 1E, no BBU support (based on LSI 1068e)

Fibre Channel controller	Fibre Channel Ctrl 2 x 4 Gb Emulex LPe11002 MMF LC
	Fibre Channel Ctrl 1 x 4 Gb Emulex LPe1150 MMF LC
	Fibre Channel Ctrl 1 x 4 Gb Qlogic QLE2460 MMF LC
	Fibre Channel Ctrl 2 x 4 Gb Qlogic QLE2462 MMF LC
	Fibre Channel Ctrl 2 x 8 Gb Emulex LPe12002 MMF LC
	Fibre Channel Ctrl 1 x 8 Gb Emulex LPe1250 MMF LC
LAN Controller	Ethernet Ctrl 1 x 1 Gb Intel® Gigabit CT Desktop Adapter
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 GT Desktop Adapter low profile
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 MT Server Adapter low profile
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PF Server Adapter low profile
	Ethernet Ctrl 1 x 1 Gb Intel® PRO/1000 PT Server Adapter low profile
	Ethernet Ctrl 2 x 10 Gb Intel® 10 Gigabit XF SR Dual Port Server Adapter
	Ethernet Ctrl 2 x 1 Gb Intel® PRO/1000 GT Dual Port Server Adapter low profile
	Ethernet Ctrl 2 x 1 Gb Intel® PRO/1000 PT Dual Port Server Adapter low profile
	Ethernet Ctrl 4 x 1 Gb Intel® PRO/1000 PT Quad Port Server Adapter low profile
Rack infrastructure	Cable Arm 2U for 3rd party racks
	Cable Management for 19-inch DataCenter / PRIMECENTER Racks
	Rackmount kit full extraction (760mm), tool less mounting
	Rackmount kit partly extraction (524mm), tool less mounting

Warranty	
Standard Warranty	3 years
Service level	On-site Service
Maintenance and Support Services - the perfect extension	
Recommended Service	7x24, Onsite Response Time: 4h
Spare Parts availability	5 years
Service Weblink	http://ts.fujitsu.com/Supportservice

Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:
http://ts.fujitsu.com/aboutus
Take back and Recycling information:
http://ts.fujitsu.com/recycling

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